

**UNITED STATES OF AMERICA  
DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
RENTON, WASHINGTON 98055-4056**

**Exemption No. 5427**

In the matter of the petition of

**Evergreen International Airlines**

**Regulatory Docket No. 26809**

for an exemption from §§ 121.314  
and 135.169(d) of the Federal  
Aviation Regulations

**PARTIAL GRANT OF EXEMPTION**

By letter dated March 4, 1992, Kirk Carrillo, Systems Engineering, Evergreen International Airlines (EIA), petitioned for exemption from § 121.314 of the Federal Aviation Regulations (FAR) to permit a 90-day extension in the compliance time for the retrofit of Class D cargo compartment liners in Boeing Model 747 airplanes. By letters dated November 20, 1990, and February 7, 1991, Mr. Joseph D. Vreeman, Vice President, Engineering and Maintenance, Air Transport Association of America (ATA), petitioned for exemption from §§ 121.314 and 135.169(d) of the FAR to permit up to a 36-month extension in the compliance time for the retrofit of Class C and D cargo compartment liners. The petition was on behalf of all affected operators, and was partially granted in Exemption No. 5288. The time extension for the Boeing 747 airplanes expires on March 20, 1992.

**Section of the FAR affected:**

Section 121.314, as amended by Amendment 121-202, and § 135.169(d), as amended by Amendment 135-31, require, in part, that after March 20, 1991, all Class C and D cargo compartments greater than 200 cubic feet in volume, used on airplanes in air carrier, air taxi, and commercial service, have liners constructed of fiberglass or material satisfying the test requirements of § 25.855, as amended by Amendment 25-60, or, in the case of liners approved prior to March 20, 1989, aluminum. It must be noted that liners constructed of fiberglass, if not previously type certificated for use in the airplane model involved, must be shown to comply with the regulations incorporated by reference in the type certificate for that model.

ANM-92-021-E

**Related Section of the FAR:**

Section 25.855(a-1)(1), as amended by Amendment 25-60, incorporates a new flame penetration test using an oil burner. Unlike §§ 121.314 and 135.168(d) which permit the use of fiberglass or aluminum construction, § 25.855(a)(1) requires this test of all liner materials in Class C and D cargo compartments on affected airplanes, regardless of whether or not the material is fiberglass. These test standards are contained in Appendix F, Part III, of Part 25. Except to the extent it is incorporated by reference in §§ 121.314 and 135.169, this section applies only to transport category airplanes for which an application for type certificate is made after June 15, 1986.

**The petitioner's supportive information is as follows:**

"The referenced FAR requires upgrade to the compartment liners in class "C" and "D" cargo compartments on or before March 20, 1992. Evergreen International Airlines (EIA) is complying with this requirement on all our aircraft with these compartments and will have them complete by the deadline, with the following exception.

"EIA is primarily a freight airline, operating DC-8, DC-9, 727, and 747 aircraft. The application of FAR 121.314 is very straightforward to all of these except our 747 aircraft. EIA's 747 aircraft fall into three major types:

- "1. Aircraft originally delivered from Boeing as convertibles, and therefore having lower cargo compartments that can be considered class "C" or class "E", depending on whether EIA is flying freight or passengers.
- "2. Aircraft originally delivered from Boeing as passenger, which were modified to freighters by Boeing Wichita. These aircraft had the lower cargo compartment fire extinguishers removed and the compartments were reclassified to class "E".
- "3. Aircraft originally delivered from Boeing as passenger, which were modified to freighters by GATX/AIRLOG. This STC in this case did not address the lower cargo compartments at all, and no extinguishers were removed. Technically, these compartments are still class "C".

"When the referenced FAR was first being discussed, EIA was of the understanding that our dedicated freighters, did not require the liner changes for a passenger style (class "C") lower cargo compartment. We began planning for implementation on our passenger aircraft, and on our narrow body freighters (which have class "D" lower cargo compartments) but it was thought that this rule did not apply to our 747 freighters.

"In early December of 1991, EIA realized that the aircraft identified in item 3 above were technically still class "C" and submitted a proposal to supplement the Airplane Flight Manual fire fighting procedures and reclassify the lower cargo compartments to class "E" on these aircraft. This office has been working with the [Seattle Aircraft Certification Office] ACO since December to resolve this issue.

"EIA requests an extension to the compliance date of FAR 121.314 for our 747 freighter

aircraft to allow the ACO more time to finish their approval process." EIA estimates that a 90 day extension should be sufficient for them to obtain the necessary FAA approval of reclassification of the lower lobe cargo compartments.

The FAA finds, for good cause, that action on this petition should not be delayed by publication and comment procedures for the following reasons: (1) a grant of exemption would not set a precedent in that this matter involves circumstances of this industry's efforts to achieve compliance prior to the deadline established by the regulation, (2) delay in acting on the petition would be detrimental to the petitioner by reducing the available cargo payload. The FAA was first made aware of the extent of compliance problems with this regulation by means of petitions for exemption filed by the Air Transport Association and the Regional Airline Association, in late 1990. The compliance deadlines, as stated in those exemptions, were based on the scheduled release dates of service information and the associated time required to implement the modifications. In granting the petition, the FAA is not setting a precedent with respect to the overall level of safety provided in the fleet.

**The Federal Aviation Administration's analysis/summary is as follows:**

The petitioner's request is limited to an extension of the compliance time, as already extended by the exemption granted to ATA by Exemption 5288. In this case, the petitioner has elected a course of action whereby certain cargo compartments that are currently affected by the referenced requirements will be reclassified so that the requirements are no longer applicable. Due to a legitimate misunderstanding on the part of the petitioner, the request for this reclassification was not submitted in time for the necessary FAA engineering review and approval to be accomplished. The review process is currently underway. This delay resulted from confusion on the part of the petitioner as to whether the compartments in question were, in fact, covered by the Part 121 regulation since the aircraft was operating in an all-cargo mode and the referenced §§ 25.857(c)(3) and 25.857(d)(2) refer to passengers. When the petitioner discovered the proper interpretations of Parts 121 and 25, a petition for exemption and an engineering change to the aircraft were immediately submitted.

In this regard, the difference between the requirements for a Class C compartment and a Class E compartment (all-cargo) is primarily that Class C compartments require a fire suppression system to be installed, and Class E compartments do not. Class E compartments rely on the fact that there are no passengers on board and use oxygen starvation to combat a fire. Class E compartments also require a means to shut off ventilation to the compartment whereas Class C compartment require a means to control ventilation. The FAA understands that the operator intends to retain the fire suppression system currently installed, even after the compartments are reclassified. Since it is likely that the reclassification may involve a minor, or even no change to airplane hardware, the continued operation of the airplane in all-cargo mode would not constitute a safety hazard. Nonetheless, the petitioner must complete the necessary review of the installation to determine what, if any, hardware or procedural changes are necessary, and submit them to the FAA for approval. The FAA considers that a maximum of 30 days should be

necessary for this process.

Other information as discussed in Exemption No. 5288 continues to be relevant to this petition.

In consideration of the foregoing, I find that a partial grant of exemption is in the public interest and will not affect the level of safety provided by the regulations. Therefore, pursuant to the authority contained in §§ 313(a) and 601(c) of the Federal Aviation Act of 1958, delegated to me by the Administrator (14 CFR 11.53), Evergreen International Airlines is hereby issued a partial granted of exemption to permit operation, under the provisions of Part 121 of the FAR, of airplanes that do not comply with the provisions of § 121.314 of that part. The following limitations apply to this exemption:

1. This exemption is limited to Boeing Model 747 series airplanes.
2. This exemption expires on May 19, 1992.

Issued in Renton Washington, on

Darrell M. Pederson  
Acting Manager,  
Transport Airplane Directorate  
Aircraft Certification Service

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March 13, 1992